Advancing the Prevention of Mental, Emotional, and Behavioral Disorders in Adolescence:

A Science to Service Symposium

June 5, 2012 in Washington, DC

Sponsored by the U.S. Department of Health and Human Services
Office of the Assistant Secretary for Health
Adolescent Health Working Group and the Office of Adolescent Health

Contents

Symposium Summary

On June 5, 2012, the Office of Adolescent Health (OAH), within the U.S. Department of Health and Human Services (HHS), and the HHS Adolescent Health Working Group hosted a forum: **Advancing the Prevention of Mental, Emotional, and Behavioral Disorders in Adolescence: A Science to Service Symposium** (Symposium). Approximately 65 federal staff attended, primarily from agencies within HHS, as well as the U.S. Department of Agriculture, Department of Justice, Department of Housing and Urban Development, and the Department of Education.

The 2010 Senate Appropriations Committee's report which established OAH as a new office within HHS also encouraged OAH and the Substance Abuse and Mental Health Services Administration (SAMHSA) to coordinate efforts to implement the recommendations of the National Research Council (NRC) and the Institute of Medicine's (IOM) 2009 report, *Preventing Mental, Emotional, and Behavioral Disorders in Young People: Progress and Possibilities*. Specifically, the Committee asked OAH to: (1) support the design and prioritization of evidence-based prevention and promotion programs that address mental, emotional, and behavioral (MEB) disorders; and (2) support research and evaluations in areas where the evidence-base is lacking or needs improvement.

The objectives of the one-day symposium were to:

1) Increase awareness among federal staff and leadership of cutting edge prevention research;
2) Highlight effective translation and implementation strategies; and
3) Promote opportunities for collaboration among research and service agencies and staff.

At the Symposium, attendees were welcomed by Evelyn Kappeler, Acting Director, OAH; Wanda Jones, Ph.D., Principal Deputy Assistant Secretary for Health in the Office of the Assistant Secretary for Health; and Larke Nahme Huang, Ph.D., Senior Advisor, Children Youth and Families, in the Administrator's Office of Policy Planning and Innovation at SAMHSA.

Five researchers presented on three panels (implementation, prevention infrastructure, and emerging strategies in prevention) that were designed around the framework of the IOM report's recommendations. Karen Blase, Ph.D., University of North Carolina—Chapel Hill, and Marc Atkins, Ph.D., University of Illinois—Chicago, addressed implementation; Lisa Sanbonmatsu, Ph.D., National Bureau of Economic Research, discussed emerging strategies in prevention; and Richard Spoth, Ph.D., Iowa State University, and David Hawkins, Ph.D., University of Washington, spoke to prevention infrastructure. Members of the HHS Adolescent Health Working Group moderated the panels and facilitated discussions between presenters and audience members on the implications of presenters' work for federal planning and policy initiatives. The Symposium concluded with a roundtable discussion moderated by Trina Anglin, M.D., Ph.D., from the Health Resources and Services Administration, Maternal and Child Health Bureau. Joining the presenters for the roundtable were Kristin Anderson Moore, Ph.D., Child Trends, and Nadia Sexton, Ph.D., Casey Family Programs.

The Symposium identified several concrete action steps to move federal agencies forward in MEB disorder prevention and mental health promotion and to stimulate partnerships across federal agencies. Also discussed was the desirability of better aligning federal funding in order to facilitate both.

The Symposium was developed by the Mental Health Subcommittee of the HHS Adolescent Health Working Group, which is convened by the Office of Adolescent Health and includes representatives from the following agencies:

- Centers for Disease Control and Prevention;
- Administration for Children and Families;
- Agency for Health Research and Quality;
- Department of Justice;
- Food and Drug Administration;
- Health Resources and Services Administration - Maternal and Child Health Bureau;
- HHS Center for Faith-Based & Neighborhood Partnerships;
- Office of the Secretary;
- National Institute of Mental Health;
- National Institute on Drug Abuse;
- Substance Abuse and Mental Health Services Administration; and
- Regional Health Administrators.

About the IOM Report

The Symposium grew from a 2009 report by the National Research Council (NRC) and the Institute of Medicine (IOM) on adolescent mental health. The report, *Preventing Mental, Emotional, and Behavioral Disorders in Young People: Progress and Possibilities*, and its 1994 predecessor, *Reducing Risks for Mental Disorders: Frontiers for Preventive Intervention Research*, have catalyzed improvements in how the United States addresses the mental health needs of children and adolescents. The 2009 report was authored by the NRC and the IOM's Committee on the Prevention of Mental Disorders and Substance Abuse among Children, Youth, and Young Adults, which was formed under the auspices of the Board on Children, Youth, and Families. The report details the committee's six charges:

1. Review promising areas of research that contribute to the prevention of mental disorders, substance abuse, and problem behaviors among children, youth, and young adults (to age 25), focusing in particular on genetics, neurobiology, and psychosocial research as well as the field of prevention science.
2. Highlight areas of key advances and persistent challenges since the publication of the 1994 IOM report *Reducing Risks for Mental Disorders: Frontiers for Preventive Intervention Research*.
3. Examine the research base within a developmental framework throughout the life span, with an emphasis on prevention and promotion opportunities that can improve the mental health and behavior of children, youth, and young adults.
4. Review the current scope of federal efforts in the prevention of mental disorders and substance abuse and the promotion of mental health among at-risk populations, including children of parents with substance abuse or mental health disorders, abused and neglected children, children in foster care, children whose parents are absent or incarcerated, and children exposed to violence and other trauma, spanning the continuum from research to policy and services.
5. Recommend areas of emphasis for future federal policies and programs of research support that would strengthen a developmental approach to a prevention research agenda as well as opportunities to foster public- and private-sector collaboration in prevention and promotion

efforts for children, youth, and young adults, particularly in educational, child welfare, and primary care settings.

6. Prepare a final report that will provide a state-of-the-art review of prevention research.

The Symposium furthers the work of the committee's fifth charge: recommending areas for future policies and research and encouraging public-private sector collaboration in prevention and promotion efforts. Since the 1994 IOM report, evidence has emerged that MEB disorders are common and begin early in life, and that the greatest prevention opportunity for those disorders is in childhood and adolescence. In light of these and other areas of progress in the field, the report calls for a national prioritization of the prevention of MEB disorders and mental health promotion in children and adolescents. In so doing, it acknowledges that prevention and promotion among this cohort has not been a national priority to date.

The lack of emphasis and attention on MEB prevention and mental health promotion is indicative of a broader systematic health care issue in the United States—the skew towards treatment rather than prevention. As a nation, the United States is hindered by a historic tendency to focus on the treatment of disease, rather than the promotion of health and prevention, though this is slowly changing in response to growing support for prevention.

The IOM report also supports and further refines the earlier 1994 definition of "prevention." Acknowledging the obvious value of preventing the relapse of disease, the committee proposes a national emphasis be on "true prevention," or the reduction of risk factors, as well as mental health promotion, classified as the promotion of protective factors such as supportive family, school, and community environments.

Another area of progress since the 1994 report is the knowledge that a small number of genes do not explain the majority of MEB disorders. Rather, exposure to environmental risk factors is more frequently to blame. Specifically, the report recognizes that poverty is commonly a backdrop to MEB disorders in adolescence and so, although not a focus of the report, it recommends that all future discussions of MEB prevention include poverty prevention and consider the prioritization of children and adolescents living in poverty and its associated high risk circumstances. In other words, the report highlights the importance of strengthening families, schools, and neighborhoods as promising areas of prevention research along with more targeted efforts to discover the interplay between certain genes and environmental factors.

> *"The future of prevention requires combined efforts to (1) apply existing knowledge in ways that are meaningful to families and communities and (2) pursue a rigorous research agenda that is aimed at improving both the quality and implementation of interventions across diverse communities." –IOM 2009 report*

Presentations

Welcome

At the Symposium, attendees were welcomed by Evelyn Kappeler, Director of the Office of Adolescent Health; Wanda Jones, Dr.P.H., Principal Deputy Assistant Secretary for Health in the Office of the Assistant Secretary for Health; and Larke Nahme Huang Ph.D., Senior Advisor, Children Youth and Families, in the Administrator's Office of Policy Planning and Innovation at SAMHSA. Director Kappeler and Dr. Huang noted that the Symposium was a dedicated effort of the Adolescent Health Working Group, representing agencies across HHS as well as other federal departments. They thanked the Symposium planning committee for their significant efforts and collaboration, as well as the speakers—renowned in their field—for taking the time to speak at this forum. Director Kappeler also recounted the legislative charge to OAH to address the recommendations of the IOM report.

Dr. Jones discussed the transition from childhood to adolescence as the least understood and most socially laden period of development, where the greatest opportunity exists for intervention. This is especially true in the context of MEB disorders, given the growing knowledge and evidence base surrounding disorders and the increasingly accepted truth that, when children develop such a disorder, it is not a choice. She also noted the importance of caring adults in a child's life, and that the presence of such an adult may be the most critical element in creating resilient teens.

Dr. Jones stated that between 14 and 20 percent of adolescents are affected by a MEB disorder. As such, she emphasized that prevention is crucial, as the United States cannot afford to squander the potential of one in five children. The country cannot afford it from a community perspective, nor from a labor or economic perspective.

Panel One: Implementation

Karen Blase, University of North Carolina-Chapel Hill and Marc Atkins, University of Illinois – Chicago
Moderator: April Velasco, Ph.D., Deputy Regional Health Administrator for HHS Region II

Karen Blase, Ph.D.

Karen Blase presented on the importance and application of implementation science to advance the prevention of MEB disorders in adolescence, and the concept of implementation science—the study of practice, program, organizational and systems factors that influence the use, sustainability, and scale-up of evidence-based programs in typical service settings.

She noted that achieving socially significant outcomes requires a combination of both the best evidence and the best implementation practices in a hospitable context. If the focus is on just one of these strategies, the final product will not be as successful because fidelity is likely to be compromised. Additional high-level points from her presentation are highlighted below:

- **Implementation science is the "to," or the bridge, in "Science to Service."** Implementation takes our best intervention evidence and ensures its utilization in actual service to adolescents. For example, if an intervention is proven as 100 percent effective, but is effectively implemented only 20 percent of the time, only a 20 percent impact will be realized. Developing

interventions, and figuring out how best to implement them, are very different processes. The goal of implementation science is to turn "independent variables" within interventions into "dependent variables" (e.g. how do we 'produce' practitioners and agencies who can reliably implement evidence-based practices with fidelity).

- **Implementation is crucial to retaining the value of interventions.** In fact, less effective interventions implemented well can out-perform more effective interventions that are less well implemented. Evidence-based programs that are implemented and executed poorly can actually perform less well than treatment as usual. Those implementing interventions should ask, "Are we implementing this intervention as intended, and is there a way to measure whether we're implementing this as intended (e.g. fidelity)?"
- **Consider the continuum and complexity of implementation.** Dr. Blase noted several service and system change strategies that she has examined through her work—the diffusion and dissemination of information; training; passing laws, mandates, and regulations; providing funding or incentives; and implementing organizational changes or reorganizations— and that the literature indicates that not one of these, when implemented alone, is effective.
- **It takes between two and four years to fully implement programs.** During that time, the stages of implementation must be acknowledged: exploration; installation (i.e., hiring and training, a stage that's often neglected); initial implementation, which is often volatile; and the process of full implementation when the implementation infrastructure and system supports are in place and routinely producing acceptable fidelity and outcomes similar to the research findings. With respect to interpreting outcome data, Dr. Blase noted that fidelity and outcome data should be collected starting with initial implementation, but the summative outcomes of an intervention that determine its "worth" are best judged when the intervention is fully implemented. She also noted that sustainability is not a separate stage but should be a part of the work occurring in every stage from exploration through full implementation.

Dr. Blase's areas for consideration were structured around implementation science's implications for funding opportunities, infrastructure development, alignment and systems change, and evaluation.

Funding opportunities:

1. *Recognize the importance of the planning year.* Dr. Blase is noticing that federal agencies are increasingly doing so.
2. *Fund implementation teams.* These teams should include representatives from a variety of disciplines and systems that have a strong knowledge of innovation, implementation best practices, and the use of improvement cycles, and be willing to encourage systems change *(also see point 6 below regarding program model purveyors)*. These teams can promote systems change at multiple levels and can be formed through partnerships with researchers, intermediary organizations, local communities, and state or federal partners. Enabling these partnerships helps to create and foster sustainability of the program.

Infrastructure development:

3. *Use active implementation frameworks.* These frameworks can guide and increase understanding of effective implementation with fidelity, and address implementation challenges.
4. *Utilize purveyors*. These parties are the entities who "know how to do the work" and are often associated with the researchers. They operate alongside implementation teams and intermediary organizations, such as grantees. In some states, intermediary organizations are the link between purveyors and the community, and bring evidence-based programs into a community in a meaningful way.
5. *Institute feedback loops*. Continuous feedback can consistently inform and improve policy and practice. Ensuring communication from policy to practice and back to policy will serve to continually inform both and promote the development of a more functional environment for the new practice or intervention.

Alignment and systems change:

6. *Strive to change systems to accommodate effective innovations.* Too often programs that work are altered so that they can "fit" into existing systems/settings. Dr. Blase encouraged Symposium attendees to instead make their setting a hospitable environment for innovation.
7. *Use transformation zones.* Statewide implementation of an intervention, while sometimes mandated, is not necessarily the most functional approach. Implementing in a smaller, but representative, geographic area creates the opportunity to make adjustments before attempting statewide implementation, thus increasing the likelihood of success.

Evaluation:

8. *Evaluate programs based, in part, on how they are implemented.* Assess the fidelity of the intervention and refrain from judging outcomes until the intervention is fully implemented.

Marc Atkins, Ph.D.

Dr. Atkins spoke to his experience in implementing and integrating mental health services into urban communities and schools through the "Links to Learning" program, which operates in high poverty, urban Chicago elementary schools via universal, targeted, and individual interventions. He noted the importance of MEB disorder prevention as a necessary foundation in our efforts to improve the overall mental health of children and adolescents. Additional high-level points from his presentation are highlighted below:

- **Risk and protective factors operate in a continuum.** Mental health care exists on a continuum, from promotion all the way to mental health maintenance and the IOM's framework of broad public health. Risk and protective factors also operate in a continuum; if you're not investing in treatment, prevention efforts will be undermined.
- **Poverty "lurks in the background" of every discussion regarding the prevention of MEB disorders.** How poverty is dealt with will have significant implications for the work of preventing MEB disorders. Changes in social policy are at least as important as explicit MEB prevention.
- **In schools, frame the discussion of mental health services in the *reality of what's happening***. Dr. Atkins discussed how schools do not typically have the primary concern of preventing MEB

disorders. Rather, schools and their staff are concerned with such matters as academic progress, teacher quality, school safety, and general teacher morale.

- **Schools are the primary provider of mental health services.** However, they are not designed to be, and the type and quality of the mental health services provided there are mostly unknown.
- **Addressing learning and school adjustment are important mental health goals.** Research findings suggest that a focus directly on mental health issues has not been shown to improve learning, but that efforts focused on improving learning have been shown to improve mental health. "Links to Learning" focuses directly on learning through supporting teachers and providing extra academic support to students, and has resulted in improved student behavior (including increasing student engagement and stabilizing off-task behavior which, in turn, help increase the likelihood that children will learn). Early intervention in learning and school adjustment is crucial: aggression and low grades in first grade have a statistically significant effect for not graduating high school.
- **Information is spread by cohesion, as well as "key opinion leaders", such as teachers and family advocates.** These parties are widely respected within interpersonal networks. Their influence can improve adaptation speed by as much as a year.
- **Urban parents <u>will</u> enroll kids in mental health services.** Services should be appropriately designed for this population. For instance, though parents may be less likely to bring their children to clinics, structuring services in tandem with schools and after-school programs can be effective.

Dr. Atkins identified implementation considerations from lessons learned during his experience integrating mental health services into schools. His suggestions were influenced by the over-riding perspective that "the goal is not to make mental health services the job of schools, but to make successful schooling the job of mental health services."

1. *Consider the "mission of the setting."* Using an ecological perspective (children live in families, and families live in communities), Dr. Atkins urged Symposium attendees to consider the mission of the setting (i.e., an in-school program has a different goal than an after-school program). Specifically, consideration can be given to whether the goals of a setting already include mental health components, and/or whether mental health resources can be reallocated to better meet the goals of the setting and the sustainability of the program.
2. *Ensure that mental health services, in a prevention framework, support the setting*. One strategy is to redirect mental health resources to after-school programs, which frequently have a primary goal of promoting socio-emotional skills. Often, programs are searching for settings when settings should be searching for programs.
3. *No shortcuts.* Effective sustainability is the ultimate goal, and that sometimes requires the involvement of high-level professionals as opposed to proxies (i.e., graduate assistants).
4. *Recognize and maximize the influence of key opinion leaders.* Some key opinion leaders in a school, such as principals, are obvious. However, others may be more individual to the school—for instance, in one school a basketball coach may be well-connected and influential. In another, a guidance counselor may be that leader.

5. *Help teachers feel connected*. One way to do so is through professional learning communities.
6. *End funding silos.* These include programs that focus on only one piece of adolescent health. Dr. Atkins's quote, "Programs don't help kids, people help kids" stressed that it is the people and the relationships formed that ultimately help children, and not a particular program. Forming interdisciplinary teams that can offer broad help is essential.

Panel Two: Emerging Strategies

Lisa Sanbonmatsu, National Bureau of Economic Research
Moderator: Amy Goldstein, Ph.D., National Institute for Mental Health

Lisa Sanbonmatsu, Ph.D.

Dr. Sanbonmatsu spoke on the *Moving to Opportunity* intervention, a program offering housing vouchers to low-income families with children who lived in public housing or in project-based assisted housing in five cities across the United States. The housing vouchers allowed families to move out of public housing and into neighborhoods with lower poverty, better schools, lower crime, and more opportunities with the hypothesis that doing so would improve well-being. Enrollment in the program was open from 1994 to 1998, and results were observed longitudinally. Dr. Sanbonmatsu reported on results observed between 10 and 15 years after enrollment. The intervention clarified that community interventions can have substantial impacts on mental health. Additional high-level points from her presentation are highlighted below:

- **Reducing environmental stress factors can improve mental health outcomes.** Children in families that participated in the program and moved to better neighborhoods saw a reduction in some mental health issues and problem behaviors. For female children, the result was a reduction in serious mental health issues, disruptive behavior disorders, depression levels, and anxiety disorders, although the decreases in some types of disruptive behaviors and anxiety disorders were not statistically significant.
- **Housing programs can help reduce substance initiation and use.** Analysis of *Moving to Opportunity* outcomes found that the occurrence of some risk factors, including alcohol use, was reduced.
- **Male children were not as strongly impacted as females**. Males reported feeling less safe in their new neighborhood and reported no difference in their drug use or their friends' drug use. Qualitative research on *Moving to Opportunity* participants suggests that males may face a more hostile welcome into their new communities and so align with higher-risk peer groups, and "act tough" for protection.

In alignment with the IOM report, the *Moving to Opportunity* program highlights the importance of community-level factors and non-health interventions for positive mental health outcomes. Dr. Sanbonmatsu's suggestions, informed by lessons learned from the *Moving to Opportunity* program are as follows:

1. *Consider community and other non-health interventions that help improve a family's environment,* such as housing programs, when attempting to impact adolescent mental health.

2. *Braid funding.* For example, *Moving to Opportunity* had HUD supporting one aspect of its evaluation and a network of other entities, including private foundations, supporting other parts of the evaluations. Braiding the funding for evaluations could eliminate duplication and increase efficiency.
3. *Support research that utilizes multidisciplinary teams.* Dr. Sanbonmatsu detailed the extensive team used to evaluate the many aspects of *Moving to Opportunity* and the benefit that has had for garnering evidence-based lessons learned.
4. *Expand understanding of how to use mass media.* Though *Moving to Opportunity* did not utilize mass media, Dr. Sanbonmatsu noted the potential and possible implications that the Internet and media promotion could have.
5. *"Unpack" pathways to health.* Dr. Sanbonmatsu used the example of detailed follow-up in another study that revealed how peer-based interventions were less effective than parent-based, as the peer-based interventions tended to perpetuate deviant behavior.

Panel Three: Infrastructure

Richard Spoth, Ph.D., Iowa State University and J. David Hawkins, Ph.D., University of Washington
Moderators: Jacqueline Lloyd, Ph.D., and Belinda Sims, Ph.D., National Institute on Drug Abuse

Richard Spoth, Ph.D.

Dr. Spoth presented on the PROSPER (**Pro**moting **S**chool-community-university **P**artnerships to **E**nhance **R**esilience) evidence-based delivery system. It supports community partnerships that implement scientifically-proven programs designed to strengthen families, promote positive youth development, and help youth avoid substance misuse and other behavioral problems. He noted the core components of translating evidence-based prevention as follows:

- Necessary evidence-based interventions;
- Necessary, broad-based community delivery of evidence-based interventions;
- Translational infrastructures/systems; and
- Federal/state collaborations.

Dr. Spoth's presentation summarized how each of these four components could be addressed and the related role of evidence-based delivery systems like PROSPER. In this context, Dr. Spoth emphasized several points:

- **Effective universal interventions can have multiple "cross-over" effects.** Universal interventions that address common risk and protective factors related to adolescent health can result in a wide-range of positive outcomes.
- **There are advantages to interventions being grounded in existing infrastructure.** The PROSPER program is grounded in the public schools and the U.S. Department of Agriculture's cooperative extension system.
- **Developing a clear sustainability model is critical.** Instead of putting a temporary team in place for program implementation, PROSPER prioritized sustainability by establishing prevention coordinating teams (cooperative extension staff with relevant expertise). These teams have regular communications with both the community-level teams (public school staff, parents, etc.)

and university research staff. This sustained communication enables the prevention coordinating teams to successfully deliver technical assistance for both family- and school-setting evidence-based interventions. To enhance sustainability, PROSPER has clearly defined benchmark scoring to assess progress across all phases of program implementation. A long-term randomized controlled study of PROSPER has shown:

  - Effective mobilization of community teams
  - Community teams sustained programming efforts for ten years
  - Community teams achieved relatively high recruitment rates for family program participation
  - All programs implemented with high levels of quality
  - Positive effects on family strengthening, parenting, and youth skill outcomes
  - Youth score significantly lower on a range of problem behavior outcomes (both substance misuse and conduct problems)
  - Reductions in negative peer influences indicated by social network analyses
  - Indications that it's more cost efficient than regular programming; also, that it's cost effective and cost beneficial

- **PROSPER benefits higher-risk youth.** For some outcomes, the PROSPER delivery system has the most significant positive impacts for the most at-risk students. In this connection, Dr. Spoth noted that social network analysis showed how the PROSPER program had impacts on friend groups because it helped to encourage friendships with non-substance users.

In reflecting upon ways to scale up the PROSPER program, Dr. Spoth described a PROSPER Partnership Network under development; it includes state readiness assessments and motivational coaching to guide adoption of the model. He also noted the following lessons and suggestions from PROSPER research:

1. *Expand partnerships among "practice people" and "science people";*
2. *Promote a common understanding, language, and attitudes concerning evidence-based prevention;*
3. *Make early stage investments; and*
4. *Ensure fidelity of the core factors in community partnership success, including ongoing, proactive technical assistance, benchmarking progress, well-integrated process and outcome evaluation, and strategic planning for sustainability.*

Further, Dr. Spoth identified four key categories of federal action (grouped with the acronym "PIES"), discussing specific strategies under each category:

1. *Plan and organize for infrastructure development;*
2. *Innovate funding mechanisms;*
3. *Embed research in national prevention systems;*
4. *Systemize focus on infrastructure development.*

Dr. Spoth added that the solution to preventing MEB disorders should involve more than generating additional, targeted programs for specific risk factors. The "operating systems" that we have, which include the PROSPER model, are flexible enough to target different ages and segments of the population.

J. David Hawkins, Ph.D.

Dr. Hawkins presented on the *Communities that Care (CTC)* system, which helps community decision makers select and implement tested, effective prevention policies and programs to address youth risk factors and strengthen community protection. In discussing *Communities that Care* and community systems that promote evidence-based practice more broadly, he noted the following high-level points:

- **Risk and protective factors are unevenly distributed.** Dr. Hawkins discussed how *Communities that Care* helps identify elevated risks and important protective factors in a community—different communities have different profiles of risk and protection and will need to choose programs to address their needs.
- **Programs should meet the unique aspects of communities.** To address risk factors, there are excellent evidence-based programs, but they are not widely used. Communities want to pick programs that meet their specific needs. *Communities That Care* allows both for evidence-based programs to become more widespread, and for communities to select programs that work best for them. *Communities that Care,* for instance, works like an "operating system," developing a community's capacity to build a coalition of stakeholders, assess risk and protective factors, address priority risks, build protection and support/sustain high fidelity implementation of the chosen interventions.
- **Communities That Care has five phases:**
  1. Get started (idea is shared by champions; community assessment);
  2. Get organized (orientation and training of key leaders and *CTC* board);
  3. Develop a profile (of risk and protective factors and youth behavioral health outcomes);
  4. Create a plan (pick evidence-based policies and programs to address elevated risks);
  5. Implement and evaluate (monitor implementation fidelity and evaluate processes and outcomes).

Dr. Hawkins suggested the following for achieving and sustaining community-wide outcomes, such as those seen with *Communities that Care*, more broadly across the nation:

1. *Allow appropriate time for effective implementation and evaluation.* With *Communities that Care,* Dr. Hawkins noted that it takes at least a year just to set up the program and between 4 and 10 years to see its full effects.
2. *Braid funding streams*. Doing so could benefit not only the programs which receive that funding, but also the agencies that have the opportunity to collaborate.
3. *Utilize purveyors.* These providers of evidence-based programs and services can actively work to help states and localities implement the practice or program with fidelity and good effect, and can accumulate data and strive for continuous program improvement.

4. *Utilize "drivers."* Drivers can work in connection with implementation, but can also ensure that the system is adjusting to sustain program changes and help them to become systemic.
5. *Make federal grants to states*. State systems are often the ones that can make change to encourage sustainability of evidence-based policies and practices. Such grants can include resources for states to help communities install effective interventions and programs with fidelity. A potential vehicle for this process is a capacity building grant with controlled trials embedded to monitor effects.
6. *Use tested, effective prevention operating systems.* Doing so can help federal agencies to achieve the recommendations outlined in the Office of Management and Budget's May 2012 memo, "Use of Evidence and Evaluation in the 2014 Budget." Using effective operating systems can also help federal agencies test the impact of these systems through competitively granted randomized trials.
7. *Federal agencies can create a central list of evidence-based programs*. Currently, there are a diverse range of lists coming from different agencies and this may undermine their utility and credibility. Creating a consolidated list makes sense given the shared risk factors that impact multiple issues. For example, underage drinking, depression, tobacco use, school performance and romantic relationships are all affected by shared risk factors. Programs that impact shared risk factors can help improve multiple outcomes.

Potential Next Steps

To build upon the discussions of the Symposium and the insightful presentations and suggestions of its speakers, several potential action steps were identified and are grouped below in the following categories: first, to move federal agencies forward in MEB disorder prevention and mental health promotion; second, to stimulate partnerships across federal agencies; and third, to realign federal funding in order to facilitate both. In addition to being informed by the Symposium's presentations and discussions, these steps incorporate evaluation responses of Symposium attendees.

Move forward with MEB disorder prevention and mental health promotion

1. **Execute a cross-agency assessment on "what works**." There are several reasons for doing this. One is the repeated observation during the Symposium that prevention interventions which target one risk factor often result in the prevention of multiple risk factors. In addition, a cross-agency assessment could inform federal adaptation and implementation of evidence-based programs. As part of this assessment, agencies could clarify the purpose, scope and criteria used for the various lists of evidence-based program models in a way that makes differences among them clear to users.
2. **Evaluate and simplify the number of evidence-based program lists**. To the last point, above, the number of lists of evidence-based programs—each developed with a specific purpose and scope and, therefore, different selection criteria—may be a source of confusion among users. Agencies could work toward increasing the consistency with which the information is vetted and presented.

3. **Encourage collaboration among professions and also across research and clinical disciplines.** Engaging professionals in arenas other than mental/emotional/behavioral fields (such as educators) could advance promotion, prevention, and treatment .
4. **Create opportunities for programs which address a specific outcome, such as HIV or drug abuse, to assess its impact on MEB risk factors in adolescence.** For example, programs could include mental health questions in evaluative efforts of interventions not traditionally considered to be mental health oriented. As the *Moving to Opportunities* project demonstrated, interventions that may not initially be targeting mental health may actually have significant impacts on MEB disorders or mental health promotion.
5. **Strengthen the impacts of evidence-based programs**. Evidence-based programs are categorized as such because they are proven to reduce risk factors or otherwise positively impact a targeted population. However, sometimes these impacts can be marginal (i.e. the program has a small "effect size"). The impacts of evidence-based programs could be improved by: adding both social and medical/clinical evidence-based practices; identifying evidence-based programs that complement one another in a community-based setting, e.g., one or more health promotion programs, prevention programs, and treatment programs; and identifying evidence-based programs that can be offered in sequence, to strengthen and sustain impacts.
6. **Invest in implementation science, to build strategies that efficiently and effectively support "scaling up."** Additionally, federal agencies could assess the kinds of infrastructure and tools that are needed for initial replication, initial scale-up and widespread scale-up, and how these processes could become efficient and cost-effective.
7. **Implement evidence-based programs in settings with high-risk children and youth**, carefully assessing the critical core components and adaptations for populations such as children in foster care, juvenile justice settings, second chance homes, homeless shelters, high-poverty schools, and child care centers in high-crime communities. Doing so could inform the development of strategies for universal promotion and prevention in high-risk populations. This step could build from research of populations living in poverty showing that when one person in a household is employed, a family experiences stabilizing effects.
8. **Ensure that MEB disorder prevention and health promotion work is community driven, while still building on existing infrastructure.** Programs could be more conducive to the community settings, including families and schools, in which they're intended to work. Agencies can leverage the existing infrastructure of a community by encouraging the use of operating systems, such as PROSPER and *Communities that Care*, that are sensitive to the specific needs of the communities in which they are implemented.

Stimulate partnerships across federal agencies

1. **Create, and collaborate within, interagency teams.** Every presenter talked about the importance of teams. The Adolescent Health Working Group and the Symposium are positive examples of federal agencies working across agencies. Once agencies are working together, other desired outcomes such as braided funding and shared data and data collection will be more feasible. Two next steps are to identify what makes a successful interagency federal team, and identifying what the top barriers are to overcoming silos in MEB disorder prevention.

2. **Braid funding.** Presenters and participants alike mentioned moving towards integrated, braided funding streams that can help build prevention infrastructure at both the state and community level. Participants also felt that a change in funding would ease the burden felt by communities and allow them to tailor implementation approaches to their unique needs. Challenges do exist, however, particularly regarding augmentation limitations and the potential for a dual burden of reporting and other requirements placed upon grantees.
3. **Hold ongoing collaborative meetings.** Meetings like the Symposium that reach across agencies enable staff to have ongoing exposure to the work of other agencies. In turn, this helps make everyone more aware of opportunities for collaboration and partnership.

Better align federal funding systems

1. **Utilize financing strategies to sustain programs in a way that produces results.** For instance, it takes multiple years to see results of prevention programs, but funding streams are often much shorter than that. Agencies could consider how to modify funding streams to reflect these outcome cycles.
2. **Align funding as much as possible.** In line with braiding funding, Symposium participants agreed that funding processes could be more unified across departments and agencies. This could involve an alignment of reporting tools, required documentation, and funding schedules, as well as shared, common outcomes that are measured consistently across agencies.
3. **Collaborate on technical assistance efforts.** Doing so could allow all who provide technical assistance across agencies to share resources and will minimize the logistical burden on grantees.

Closing

As the Symposium came to a close, Dr. Huang reiterated the enormity and importance of the task at hand. Improving upon the prevention of MEB disorders and promoting the positive mental health of youth does not just call for programs and interventions; rather, it requires a broader perspective and consideration of the environments in which they live. This means considering the heavy burden of poverty as well as the complex interaction of adolescents' physical health, their environmental factors, and more. We all must collectively take these steps towards becoming a nation that cultivates and nurtures the mental health of its young people.

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